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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,516	01/20/2004	Soo-suk Lee	YPL-0072	3429
23413	7590	12/07/2004	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			YANG, NELSON C	
			ART UNIT	PAPER NUMBER
			1641	

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/761,516

**Applicant(s)**

LEE ET AL.

**Examiner**

Nelson Yang

**Art Unit**

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's amendment of claims 1-3, 6, 8-10 is acknowledged and has been entered.
2. Applicant's addition of claim 11 is acknowledged and has been entered.

***Rejections Withdrawn***

3. Applicant's arguments, see pages 4-5, filed October 10, 2004, with respect to the rejection of claims 3, 8, under 35 U.S.C. 112, second paragraph, have been fully considered and are persuasive. The rejection of claims 3, 8, under 35 U.S.C. 112, second paragraph, has been withdrawn.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Wagner et al [US 6,365,418].

With respect to claims 1, 5, Wagner et al teach arrays of protein capture agents immobilized on patches arranged in discrete, known regions (column 9, lines 34-57). Diffusion boundaries between the patches of protein capture agents such as walls of photoresist may be used to separate the patches from one another (column 16, lines 34-45).

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6. With respect to claim 2, Wagner et al teach that each of the patches of protein-capture agents comprises a self-assembled monolayer of molecules of the formula X-R-Y, where X and Y are functional groups (column 15, lines 25-40).
7. With respect to claim 3, the protein capture agents are preferably proteins (column 12, lines 51-53).
8. With respect to claim 4, Wagner et al teach that the functional groups may be alkylsiloxane monomers (column 17, lines 1-5) and the spacer group, R, may be an alkyl group (column 17, lines 30-35).
9. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Chrisey et al [Chrisey et al, Fabrication of patterned DNA surfaces, 1996, Nucleic Acids Research, 24(15), p.3040-3047].

With respect to claims 1-3, 5-9, Chrisey et al teach direct photochemical patterning of PEDA silane films using deep UV laser exposure (p.3041, col.2, pg 4), and treated with thiol-DNA films to yield identical patterned DNA surfaces. Chrisey et al further teach photoresist patterning where photoresist was coated onto a DETA- or SMPB-DETA-modified slide (p.3042, col.1, pg 1). Covalent attachment of dye- or biotin-labeled thiolated DNA to the areas in which DETA/SMPB was displayed was carried out by pipetting a solution of freshly deprotected thiolated DNA onto the patterned surface of the slide. Prior to detection of the labeled DNA the remaining photoresist was removed by agitation in acetone for 1 min, rinsing in dI water and drying under N<sub>2</sub> (p.3042, col.1, pg 2).

10. With respect to claims 4, 10, m, p(amino-ethylamino-methyl)phenethyltrimethoxysilane was used (p.3041, col.1, pg 2).

***Response to Arguments***

11. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

**Allowable Subject Matter**

12. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: while delamination is a known problem with photoresist, the prior art does not teach delaminating photoresist in order to remove non-specifically binding.

***Conclusion***

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

15. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson Yang whose telephone number is (571) 272-0826. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nelson Yang  
Patent Examiner  
Art Unit 1641

  
LONG V. LE  
SUPERVISORY PATENT EXAMINER  
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11/29/07